

GDOT Value Engineering FY 2009



What is Value Engineering?

- A formal process that breaks projects into functions utilizing a team of experts to identify solutions that satisfy the functions
- A process that can improve quality, constructability and lower life-cycle costs
- A tool used in project development
- An innovative way to change the way we think

Value Engineering Is:

- Function-based analysis
- Multi-discipline team approach
- Systematic problem solving process
- Life-cycle cost oriented
- Value oriented
- Free of normal design restrictions
- A proven management technique

What happens during a VE Study?

- Question Design Policies
- Look at alternate horizontal and vertical alignments
- Look at alternate methods of construction
- Review different materials for bridges and pavement
- Perform Life Cycle Cost Analysis
- Make changes to typical sections and lane widths
- Review need and purpose of project
- Review historical accident data
- Look at access points, staging and earthwork

Common Recommendations

- Refine Vertical Profile and Horizontal Alignment
- Use 11 foot lanes
- Modify Median
- Minimize Side Road work
- Narrow shoulders
- Modify Drainage
- Modify Bridge
- Modify Sidewalk and Multi-Use Trails
- Modify Turn Lanes

Value Engineering Timeline at GDOT

- 1996 - GDOT started VE program
- 1997 - FHWA adopted VE Regulation (\$25 million)
- 1998 - GDOT created VE Policy
- 1998 to 2002 - GDOT averaged 5 studies/year
- 2002 to 2005 - GDOT averaged 15 studies/year
- 2005 - SAFETEA-LU changed NHS requirement for VE
- 2005 to 2008 - GDOT averaged 30 studies/year
- 2008 - SB 417 lowered threshold to \$10 million

GDOT VE Program Statistics

- In 2005
 - 13 VE Studies Conducted
 - \$84 million in savings
 - For every dollar spent on VE, GDOT saved \$300
- In 2006
 - 26 VE Studies Conducted
 - \$13 million in savings
 - For every dollar spent on VE, GDOT saved \$23
- In 2007
 - 48 VE Studies Conducted
 - \$90 million in savings
 - For every dollar spent on VE, GDOT saved \$102

GDOT VE Program Statistics – FY2008

- Conducted 39 VE Studies on projects
 - All projects were over \$25 million (PE+ROW+CST)
- Conducted 2 VE Studies on policies
 - Median Policy
 - Bridge Width Policy
- Implemented 55 VE Studies
- 639 recommendations
- 304 recommendations implemented
- \$295 million in savings
- For every dollar spent on VE, GDOT saved \$138

GDOT VE Program Statistics – FY2009

- Conducted 90 VE Studies on projects
 - 37 projects > \$25 million
 - 53 projects > \$10 million but < \$25 million
- Implemented 85 VE Studies
- 738 recommendations
- 297 recommendations implemented
- \$162 million in savings
- For every dollar spent on VE, GDOT saved \$73

VE Studies Held and Implemented

- SR 234/Gillionville Road in Dougherty County
- SR 3/US 19 Turn Lanes in Spalding County
- SR 20/Loganville Highway in Gwinnett County
- SR 3/US 19 in Spalding County
- SR 87 in Bibb County
- Mitchell Street @ Southern RR in Fulton County
- Spring Street over CSX RR in Fulton County
- N. Forrest St. in Lowndes County
- SR 36 Passing Lanes in Upson County

VE Studies Held and Implemented

- I-20 @ CR 21/Three Points Road in McDuffie County
- SR 8/US 29 @ Pleasant Hill Rd in Gwinnett County
- SR8/US 29 @ Beaver Ruin Road in Gwinnett County
- I-575 @ Riverwalk Pkwy. In Cherokee County
- SR 1/SR 101 @ Oostanaula River in Floyd County
- SR 43/US 378 @ Savannah River in Lincoln County
- Frank Cochran Drive in Liberty County
- I-85 @ SR 324/Gravel Springs Rd. in Gwinnett County
- SR 120/Roswell Road in Cobb County

VE Studies Held and Implemented

- SR 3 Connector @ SR 120 Alt in Cobb County
- SR 38/US 84/Hill Ave. @ NS RR in Lowndes County
- McGinnis Ferry @ Chattahoochee in Forsyth Fulton Gwinnett
- SR 155 in Henry County
- Monticello NE Bypass in Jasper County
- SR 301 overpass @ Port Authority in Chatham County
- Covington Bypass in Newton County
- SR 12/US 278 @ Alcovy River in Newton County
- I-95 @ Horse Stamp Church Rd in Camden County

VE Studies Held and Implemented

- SR 307/Dean Forest Road in Chatham County
- SR 232 in Columbia County
- SR 92 from US 41 to Glade Rd in Cobb County
- SR 92 @ Proctor Creek in Cobb County
- SR 36 @ Yellow Water Creek in Butts County
- SR 36 @ Flint River in Butts County
- Lithonia Industrial Blvd. in DeKalb County
- SR 284 @ Chattahoochee/Lake Lanier in Hall County
- Turner Hill Rd. in DeKalb County
- Forest Hill Rd @ Sabbath Creek in Bibb County

VE Studies Held and Implemented

- SR 212 @ CR 19 in Newton County
- SR 347/Friendship Road in Hall County
- SR 42/US 23 Passing lanes in Butts County
- SR 3/US 19 @ Potato Creek in Upson County
- SR 144 in Bryan County
- SR 20 from I-575 to Scott Road in Cherokee County
- SR 20 climbing lanes in Cherokee County
- Big Shanty Extension in Cobb County
- Memorial Drive in DeKalb County

VE Studies Held and Implemented

- SR 36 Passing Lanes in Talbot Upson Counties
- Jonesboro Road in Clayton Henry Counties
- I-520 from SR 4 to SR 10 in Richmond County
- I-75 @ SR 3/US 41/Rocky Face in Whitfield County
- I-75 @ SR 136 in Gordon County
- SR 400/I-85 connector Ramps in Fulton County
- SR 32 in Coffee County
- SR 40 in Camden Charlton Counties
- I-75 @ SR 215 in Dooly County

VE Studies Held and Implemented

- SR 1/US 27 in Muscogee County
- Panola Road in DeKalb County
- SR 11/US 129 in Hall County
- Brown Ave @ NS RR and Bragg Smith St. in Muscogee County
- SR 53 in Gordon & Pickens Counties
- Lithonia Industrial Blvd. in DeKalb County
- SR 40 in Camden County
- SR 92 in Paulding and Cobb Counties
- SR 13 in Gwinnett County

VE Studies Held and Implemented

- 18 Median Turn Lane projects statewide
- I-95 NB Welcome Center in Camden County
- I-95 SB Welcome Center in Chatham County
- SR 135 in Coffee County
- SR 3 in Cobb and Fulton Counties
- SR 56 in Richmond County
- SR 41 RR Bridge in Meriwether County
- SR 3/US 19 in Upson County
- Colerain Road in Camden County

VE Studies Held and Implemented- Maintenance Projects

- I-75 from Brookwood Interchange to I-285 in Cobb Fulton
- I-575 from I-75 to Etowah River in Cherokee County
- I-95 from US 17 to I-16 in Bryan Chatham Counties
- I-75 from Florida line to SR 133 in Lowndes County
- I-85 from SR 17 to SC in Franklin Hart Counties
- I-75 from I-285 to SR 54 in Clayton Fulton Counties
- I-20 from Columbia Drive to Turner Hill in DeKalb County
- I-20 from SR 142 to SR 83 in Morgan Newton Walton
- I-16 from SR 26 to SR 29 in Laurens County

VE Studies Held and Implemented- Maintenance Projects

- I-16 from SR 96 to SR 26 in Bleckley Laurens Twiggs Counties
- I-285 from Ashford Dunwoody to Chamblee Tucker in DeKalb
- I-285 from W Paces Ferry to Ashford Dunwoody in Cobb DeKalb Fulton Counties

VE Studies Held; Implementation Pending

- SR 225/Spring Place Bypass in Murray County
- I-285 @ Atlanta Road in Cobb County
- Wrightsboro Road in Richmond County
- SR 15/US 441 in Rabun County
- SR 107 in Turner Ben Hill & Irwin Counties
- SR 25 Connector/Bay Street in Chatham County

VE Studies Held; Implementation Pending

- SR 84 in Dodge County
- SR 20 in Gwinnett & Walton Counties
- SR 141 @ SR 9 in Forsyth County
- I-85 NB HOV to HOT Conversion in Dekalb & Gwinnett Counties
- SR 119/Airport Road in Liberty County